

WHAT IS CLAIMED IS:

1. A mechanism for angularly adjusting a turntable that is rotatably mounted to a base, the turntable supporting a cutting tool, the mechanism comprising:

a lever pivotally mounted to the turntable, the lever including a yoke with opposed sidewalls separated by a distance;

a threaded rod that extends through the sidewalls of the yoke in a direction parallel to a tangent of the turntable; and

an insert located between the sidewalls, the insert having a shape suitable to engage a recess of the base, the insert having a threaded bore extending therethrough, the rod extending through the bore in threaded relation so that rotation of the rod causes lateral movement of the insert along the rod between the sidewalls, in turn resulting in angular adjustment of the turntable relative to the base.

2. The mechanism of claim 1, wherein pivotal motion of the lever moves the insert selectively in and out of engagement with the recess.

3. The mechanism of claim 1, wherein the lever is mounted to the turntable to pivot on an axis parallel to the threaded rod.

4. The mechanism of claim 1, wherein:

the turntable rotates with respect to the base on an axis; and

the lever is mounted to pivot on an axis parallel to the axis of rotation of the turntable.

5. The mechanism of claim 1, wherein the lever is generally elongate in shape, and wherein the lever is pivotally mounted to the turntable at a point located intermediate the length of the lever.

6. The mechanism of claim 1, further comprising a knob attached to an end of the threaded rod.

7. An apparatus comprising:
a base having at least one recess;
a turntable rotatably mounted to a base, the turntable supporting a cutting tool;
a mechanism for angularly adjusting the turntable relative to the base, the mechanism comprising:
a lever pivotally mounted to the turntable, the lever including a yoke with opposed sidewalls separated by a distance;
a threaded rod that extends through the sidewalls of the yoke; and
an insert located between the sidewalls, the insert having a shape suitable to engage a recess of the base, the insert having a threaded bore extending therethrough, the rod extending through the bore in threaded relation so that rotation of the rod causes lateral movement of the insert along the rod between the sidewalls, in turn resulting in angular adjustment of the turntable relative to the base.
8. The apparatus of claim 7, wherein the base includes multiple recesses corresponding to respective angular positions of the turntable with respect to the base.
9. The apparatus of claim 7, wherein pivotal motion of the lever moves the insert selectively in and out of engagement with the recess.
10. The apparatus of claim 7, wherein the lever is mounted to the turntable to pivot on an axis parallel to the threaded rod.
11. The apparatus of claim 7, wherein the lever is generally elongate in shape, and wherein the lever is pivotally mounted to the turntable at a point located intermediate the length of the lever.
12. The apparatus of claim 7, further comprising a knob attached to an end of the threaded rod.
13. The apparatus of claim 7, wherein the threaded rod extends through the sidewalls in a direction perpendicular to the sidewalls.

14. An apparatus comprised of:
a base having at least one recess;
a turntable rotatably mounted to a base, the turntable supporting a cutting tool;
an angular-adjustment lever pivotally mounted to the turntable, the angular-adjustment lever having a first insert proximal to the turntable, the first insert capable of engaging the at least one recess;
a fine-adjustment mechanism mounted to the turntable, the fine-adjustment mechanism comprised of:
a fine-adjustment lever pivotally mounted on the turntable;
a second insert having an opening therethrough, the second insert supported by the fine-adjustment lever and adapted to engage the at least one recess; and
a threaded rod supported by the fine-adjustment lever and extending through the opening in the second insert.
15. The apparatus of claim 14, wherein:
the fine-adjustment lever includes at least one notch; and
a latch holder is attached to the turntable, the latch holder containing a spring secured by a retainer plate and a latch having at least one protrusion capable of mating with the at least one notch in the fine-adjustment lever, thereby holding the fine-adjustment lever in place.
16. The apparatus of claim 15, wherein a repress plate aligns the fine-adjustment lever with the latch holder.
17. The apparatus of claim 14, wherein:
the threaded rod has a first and a second end;
a control knob is attached to the first end; and
a locking nut attached to the second end secures the threaded rod to the calibration lever.
18. The apparatus of claim 17, wherein rotation of the control knob causes the insert to move along a length of the threaded rod.
19. The apparatus of claim 18, wherein movement of the insert results in a change of a cutting angle of the cutting tool.

20. The apparatus of claim 14, wherein the fine-adjustment lever further includes:
a first sidewall having a first opening;
a second sidewall having a second opening; and
the threaded rod extends through the first opening and the second opening.

21. The apparatus of claim 14, wherein:
the worktable has an edge that defines a radius of curvature; and
the threaded rod has a length extending along a line tangential to the radius of curvature.

22. The apparatus of claim 14, wherein:
the angular-adjustment lever is mounted to the turntable to pivot on a first axis; and
the fine-adjustment lever is mounted to the turntable to pivot on a second axis perpendicular to the first axis.

23. The apparatus of claim 14, wherein:
the turntable has an outwardly extending arm; and
the angular-adjustment lever and the fine-adjustment lever are mounted to the arm.

24. An apparatus comprising:
a base having at least one recess;
a turntable rotatably mounted to a base, the turntable supporting a cutting tool;
a mechanism for angularly adjusting the turntable relative to the base, the mechanism comprising:
a lever pivotally mounted to the turntable, the lever including a fine-adjustment mechanism mounted to the turntable, the fine-adjustment mechanism comprised of:
a fine-adjustment lever pivotally mounted on the turntable;
a second insert having an opening therethrough, the second insert supported by the fine-adjustment lever and adapted to engage the at least one recess; and
a threaded rod supported by the fine-adjustment lever and extending through the opening in the second insert.

25. The apparatus of claim 24, wherein:
the fine-adjustment lever includes at least one notch; and
a latch holder is attached to the fine-adjustment mechanism, the latch holder containing a spring secured by a retainer plate and a latch having at least one protrusion capable of mating with the at least one notch, thereby holding the fine-adjustment lever in place.

26. The apparatus of claim 25, wherein a repress plate aligns the fine-adjustment lever with the latch holder.

27. A mechanism for adjusting a turntable that is rotatably mounted to a base, the turntable supporting a cutting tool, the mechanism comprised of:
a base having a means for defining a reference angle with respect to the base;
a turntable rotatably mounted to a base, the turntable supporting a cutting tool;
a first means for angularly adjusting the turntable relative to the base; and
a second means for finely adjusting the angular relation of the turntable relative to the base to within about $\pm 2\frac{1}{2}^\circ$ of the reference angle.

28. The mechanism of claim 27, wherein:

the first means includes an angular-adjustment lever that extends radially from the turntable; and

the second means includes a fine-adjustment lever that pivots along an axis perpendicular to a radius of the turntable.

29. The mechanism of claim 27, wherein:

the first means includes a first insert; and

the second means includes a second insert adapted to move along an axis tangential to a radius of curvature of the turntable.